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PATENTS
15311-2107

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE **RECEIVED**

MAY 15 2001

In Re The Application of:
Gilbert M. Wolrich et al.

Technology Center 2100

Serial No.: 09/042,417

Examiner: Firmin Backer

Filed: March 13, 1998

Art Unit: 2155

For: Reduction of Add-Pipe Logic by Op-
erand Offset Shift

Cesari and McKenna, LLP
88 Black Falcon Avenue
Boston, MA 02210
May 11, 2001

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X Response



PATENTS
15311-2107

#14
LDJ
5-16-01

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Honorable Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

RESPONSE

Applicants respectfully request that the Examiner withdraw the finality of the rejections set forth in the Office action of March 22, 2001. In that action, the Examiner rejected the claims on two new grounds, namely, double patenting and obviousness in view of the Lynch patent. As MPEP 706.07(a) states, a final rejection is not appropriate "where the Examiner introduces a new ground of rejection that is neither necessitated by Applicant's amendment of the claims nor based on information submitted in an information-disclosure statement filed during the period set forth in 37 CFR §1.97(c) with the fee

set forth in 37 CFR §1.17(p).” The new grounds of rejection were necessitated by neither.

Applicants also respectfully request that the Examiner reconsider and withdraw the double-patenting rejection based on claims 1-8 of U.S. Patent No. 6,018,756 to Wolrich et al. The Examiner contends that the only difference between the claims of the instant application and those in the Wolrich et al. patent are that the instant application’s claim 1 omits a limitation of the patent’s claim 1. As Applicants have observed in numerous previous responses, though, the instant application’s claims recite that the “mantissa signals applied to the main mantissa adder when the main mantissa adder is to subtract a pair of mantissas are offset to the left by one position from the mantissa signals applied thereto when the main mantissa adder is to add the same pair of mantissas.” The patent’s claim 1 does not include this limitation. So each claim 1 includes limitations not in the other: neither is simply a broader version of the other.

Finally, Applicants request that the Examiner reconsider and withdraw his rejections of the claims under 35 USC §§102 and 103 based on U.S. Patent No. 5,901,076 to Lynch. The Examiner says of the Lynch patent that it describes a “mantissa processing circuit for generating and applying mantissa input operands to the mantissa adder, subtracting a pair of mantissas when they are offset to the left by one position from the applied mantissa signals and add when the pair of mantissas are the same,” inviting the Applicants’ attention to certain passages in the Lynch patent. But the Examiner’s just-quoted description of Lynch’s mantissa-processing circuit bears little relationship to the limitation that Applicants’ claims define. Moreover, Applicants have reviewed the pas-

sages to which the Examiner invited their attention and have found nothing in them that discloses or suggests what those claims do define.

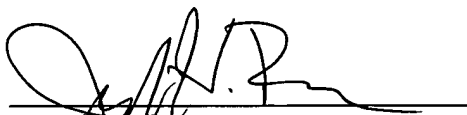
It appears that the Examiner has confused Applicants' differential preshift with conventional alignment shifting. Alignment shifting deals with the mantissas' positions with respect to each other. It is performed so that the mantissa that results from, say, adding $101_2 \times 2^3$ to $101_2 \times 2^2$ will be 1111, as it should be, rather than 1010, as it would be in the absence of an alignment shift, and it is the same for effective addition as it is for effective subtraction. The claimed subject matter, on the other hand, does not deal with the mantissas' positions with respect to each other. As the segment of Applicants' specification that begins on page 6's line 14 and continues through page 7's line 15 explains, the mantissas for the same two numbers are *both* positioned one bit farther to the left when they are effective-subtraction operands than when they are effective-addition operands. That is, Applicants' shifting is common to both mantissas, and, for both mantissas, it is different for effective subtraction from what it is for effective addition. In short, alignment shifting distinguishes between operands but is the same for effective addition and effective subtraction, while Applicants' differential pre-shift distinguishes between effective addition and effective subtraction but is the same for both operands.

Neither the Lynch patent nor any of the other prior art that the Examiner has cited discloses or suggests this concept. So none of them affords the potential for significant circuit and operational simplification described in the portion of Applicants' specification that begins on page 15's line 18.

In view of the foregoing remarks, Applicants request that the Examiner withdraw the rejections as well as their finality and allow all claims currently in the application.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'J. H. Born', is written over a horizontal line.

Joseph H. Born
Reg. No. 28,283
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